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Surface Matters. Case Conflict in Free Relative Constructions and Case Theory*

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This paper discusses the phenomenon of case conflicts in free relative (FR) constructions, focusing on its implications for case theory. Two facts are particularly interesting: First, FRs in many languages exhibit what is called the 'matching effect' – conflicting case requirements can be resolved under homophony of the two conflicting case forms; second, some even more liberal languages allow for FRs even if only one of the two conflicting case requirements can be met – as long as the case that is suppressed is 'lower' on a case hierarchy. I will show below that the case hierarchies at work here are language particular hierarchies of surface case forms.

The conception of case, as normally used in the literature, has two dimensions: the traditional usage of this notion refers to language particular systems of morphological markers for noun phrases. These systems vary in the number of markers, and also in their function. I will refer to this usage as morphological case. The second dimension of case is reflected in the usual practice of assuming that morphological case expresses more abstract properties of an NP. These properties will be called abstract case in this paper. In the generative syntactic tradition, abstract case can be a syntactic or a semantic property. So-called structural case is seen as a syntactic property, expressing the grammatical functions subject and direct object (and, in some work, also indirect object) which are encoded by genu-

ine syntactic positions or relations. For oblique cases, like dative and instrumental in Russian, it is usually assumed that these are direct reflections of thematic role. Fillmore (1968) proposed such a direct connection with his 'deep cases'.

The system of abstract cases might be the same universally. This is quite clear for thematic roles, but it is not obvious for the structural cases. Not all languages have a genuine morphological case for subjects, as, e.g., exemplified by the large group of ergative languages, and also by a non-ergative language like Icelandic. This does not mean that such languages have no subjects, it only means that subjecthood is not directly encoded in their systems of morphological case.

Thus, we have three different conceptions of case. Two abstract conceptions, one of them syntactic (grammatical functions) and one semantic (thematic roles), which are universal, and one 'concrete' conception, morphological case, which is language particular. The morphological case systems of individual languages can be seen as encoding different subsets of the abstract cases.

This might raise the question whether it is necessary to deal with morphological case at all in syntactic theory. The study of case conflict resolution strategies in FR constructions of different languages shows that morphological case is indeed indispensible. This is exemplified in a contrastive comparison of Spanish, Romanian and German FRs in section 1, and by a subtle empirical phenomenon in German discussed in section 2. This investigation also shows that case conflict resolution relies on case hierarchies, which obviously again are hierarchies of forms rather than only universal hierarchies of abstract cases. Whether, and how, these language particular hierarchies can be related to and derived from universal hierarchies is the issue of section 3. Section 4 compares the results of the discussion with alternative proposals about case inventories within optimality theory. Section 5 deals with Icelandic, which seems to be an exception, but might be integrated by taking the broader perspective that case might play its role in different grammars in different ways.

1   Free Relative Constructions

Case conflicts can occur in free relative constructions that stand for arguments of a verb, as in (1). Bresnan and Grimshaw (1978) show that English FRs are only well-formed if the FR pronoun 'matches' the requirements of both the matrix verb and the verb inside the FR:

(1) English (Bresnan and Grimshaw, 1978):
    a.   I drank [FR whatever there was]
    b.   I'll reread whatever paper John has worked *(on)
    c.   *I'll reread on whatever paper John has worked
    d.   I'll live wherever you live
    e.   I'll live in whatever town you live (in)

If the matrix verb requires an NP/DP, then the FR pronoun has to be of that category, as we see in (1a-c). The same holds for a PP requirement (1e). However, English has preposition stranding. Although there is a conflict in (1b) with respect to the forms required by the verbs – the matrix verb requires a direct object, i.e. an NP/DP, and the embedded verb a PP – , a FR is possible, if the pronoun moves up alone and strands its preposition (1b). Pied-piping as in (1c) yields ungrammaticality. This shows that it is not the requirements of the verbs that have to match, but it is the FR-initial phrase that has to match the matrix requirement, and on the other hand fulfil its requirements inside the embedded clause. One might argue that English only has this matching effect, because it has preposition stranding: (1c) might be odd because of the possibility of (1b). Groos & van Riemsdijk (1981, 173) show that Dutch is also a matching language, but Dutch does not have English type preposition stranding:[1]

(2) Dutch:
    a. *Ken   jij   met wie zij flirt?
        know you with who she flirts?
        'Do you know (the person) with who she is flirting?'
    b. Ken   jij wie zij net kuste?
        know you who she just kissed?
        'Do you know (the person) who she just kissed?'

Not all languages allow only for matching FRs. Bresnan & Grimshaw (1978) and likewise Groos & van Riemsdijk (1981) introduce a distinction between matching and non-matching languages. This distinction implies that in non-matching languages the FR pronoun is 'blind' for the requirements of the matrix verb. This can be proven wrong by data from German and other languages where a case hierarchy plays a role. Although in German the FR pronoun always has to realise the case required by the relative clause internal verb (henceforth `r-case`), the 'suppressed' case required by the matrix verb (henceforth `m-case`) plays a role in the de-

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[1]See (Vogel, to appear*b*) for a detailed discussion.

termination of the well-formedness of the construction. Pittner (1991) shows for one variant of German – it is called 'German B' in (Vogel 2001) – that a non-obeyed accusative requirement (as in (3) where the matrix verb 'einladen' requires an accusative object) can lead to ungrammaticality, namely, when the FR pronoun bears nominative. Although (3a) is well-formed in German B, (3b) is ill-formed:[2]

(3)   German B:
    a. Maria lädt ein wem   sie   vertraut
       Maria invites who-DAT she-NOM trusts
    b. *Maria lädt ein wer   ihr   vertraut
       Maria invites who-NOM her-DAT trusts

A FR with the FR pronoun in the nominative case is per se possible, likewise a FR with dative case on the FR pronoun. But a clause with a nominative FR is ill-formed if m-case is accusative in German B, while this is no problem with a dative FR. This seems to suggest that the well-formedness of a FR is not determined in a strictly local fashion. In both (3a) and (3b) the requirement for accusative case is not obeyed. This is crucial for the ungrammaticality of (3b), but not simply because the requirement is not fulfilled, but because the case on the FR pronoun is 'lower' on the case hierarchy than the suppressed one.

    Observations of this kind have repeatedly been made by many authors for many different languages. Pittner (1991) proposes the following case hierarchy for German:

(4)   nominative < accusative < obliques (i.e., dative, genitive, PPs)

German FRs have to obey the following two restrictions:

    — The FR pronoun bears the morphology of `r-case`
    — `m-case` is equal to or lower than `r-case` on the case hierarchy

    A single element, the FR pronoun, obviously has to fulfil two potentially conflicting case requirements. From a traditional point of view, it might be surprising that there are non-matching FRs at all. The grammars

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[2]About the source for the variation between German A and German B I can only speculate. It is certainly not dialectal. It might reflect a social difference. One speculation that I have is that speakers whose first language is a German dialect are more liberal (German A, these speakers find (3b) acceptable; this is the only difference between the two variants) than speakers who acquired High German as first language. But it might by a purely idiolectal variation. See also Dalrymple & Kaplan 2000 for a discussion of similar problems.

of some languages have developed strategies to resolve case conflicts in FRs by allowing cases not to be realised under certain circumstances. But not all languages did so. Strictly matching languages like English and Dutch contrast on the one hand with languages like Hindi that have no FRs of the kind illustrated above at all (cf. Dayal 1996), and on the other hand with languages like German and Modern Greek (cf. Alexiadou & Varlokosta 1995) that resolve some conflicts, or languages like Gothic (cf. Harbert 1983) and Romanian (cf. Grosu 1994) that resolve many case conflicts. A language that resolves nearly all case conflicts is Icelandic. Another important issue is that there are various possible ways to resolve the conflict. The discussed languages make use of different strategies for different situations.

Even English allows for non-matching FRs if we equal abstract case with grammatical function. Consider again example (1a), repeated below. Here the FR pronoun is the subject of the FR, but the FR is the direct object of the matrix clause:

(5) I drank [FR whatever-SU there was]-DO

The clause is well-formed because the surface forms for subject and direct object do not differ here. Another piece of evidence that surface forms are crucial comes from German B again. German has the same interrogative pronoun for inanimate nominative and accusative, i.e., *was*, but it has different ones for animates, i.e., *wer* (nominative) and *wen* (accusative). While a conflict between matrix accusative and embedded nominative cannot be resolved for animates in German B, as shown in (3b), it can be resolved for inanimates (cf. Pittner 1991):

(6) German B:
    Er   zerstörte   [was   immer ihm   begegnete]-ACC
    he-NOM destroyed   what-ACC ever   him-DAT   met

Grosu (1994) shows something very similar for Spanish and Romanian. In these languages, animate direct objects, including FR pronouns, require a preposition, the so-called 'personal *a*' in Spanish (*pe* for Romanian). Animate subjects and inanimate direct objects are bare NP/DPs. Non-matching is possible in these languages for subjects ((7a,b) and (8a,b)) and inanimate direct objects ((7e,f) and (8e,f)), but not for animate direct objects ((7c,d) and (8c,d)) and other PPs ((7g) and (8g)) (Grosu 1994, 116-119):

(7) Spanish:
    a.   con quien me quiero casar vive a la vuelta
        with whom me want marry lives at the corner
        '(the one) who I want to marry, lives at the corner'

    b.   Con lo que soñe la otra noche me espanta todavia
        with it that dreamt-I the other night me scares still
        '(That) of which I dreamt last night scares me still'

    c.   María no encontró *(a) quien la ayudó ayer
        Maria not met   *a* who her helped yesterday
        'Maria didn't meet (the one) who helped her yesterday'

    d. *Andrea tiene de quien María tanto se burlaba en su clase
        Andrea has of whom Maria so-much self mocked in her class
        'Andrea has (the one) who Maria was making so much fun of in her class'

    e.   María vindió hoy (*a) lo que compró ayer
        Maria sold today   it that bought yesterday
        'Maria bought today (that) which she sold yesterday'

    f.   No quiero revivir con lo que soñe la otra noche
        not will-I relive with it that dreamt-I the other night
        'I don't want to relive (that) of which I dreamt the other night'

    g. *Andrea salió con de quien María tanto se burlaba
        Andrea went-out with of whom Maria so-much self mocked
        'Andrea went out with (the one) Maria was making so much fun of '

(8) Romanian:
  a. Cu cine iese   Maria e deobicei un om de nimic
     with whom goes-out Maria is usually a   man of nothing
     '(He) with whom Maria goes out is usually a no-good'
  b. Cu ce   plănuiam   să ne construim o nouă casă   va fi
     with what planned-we subj us build   a new house will be
     greu de obtinut
     hard of obtained
     '(That) with which we were planning to buy a new house will be
     hard to obtain'
  c. Maria nu a   întîlnît *(pe) cine a   ajutat-o   ieri
     Maria not has met   who has helped-her yesterday
     'Maria didn't meet (the one) who helped her yesterday'
  d. *Andrea are de cine   îşi rîdea   Maria în clasa ei
     Andrea has of whom self laughed Maria in class her
     'Andrea has (the one) that Maria was making fun of in her class'
  e. Maria a vîndut azi (*pe) ce a compărat ieri
     Maria has sold today what has bought yesterday
     'Maria has sold today what she bought yesterday'
  f. Nou vom   putea obţine cu ce   plănuiam   să   ne cons-
     truim
     not will-we can   obtain with what planned-we subj us build
     o nouă casă
     a new house
     'We will not be able to get (that) with which we were planning
     to buy a new house'
  g. *Nu voi   vota pentru cu cine vorbea   Maria
     Not will-I vote for   with who was-speaking Maria
     'I will not vote for (the one) with whom Maria was speaking'

It is unlikely that there are two different abstract accusative case features,
one for animates and one for inanimates – that the feature combination
`accusative+inanimate` corresponds to the same surface form as the
combination `nominative+inanimate` in German is a more or less
accidental lexical property. But then it is strange, why (6) is well-formed,
given the evidence in (3b), if we take into account only abstract case. And
likewise, given the evidence in (7f) and (8f), it is strange that (7d) and (8d)
are ill-formed. The crucial factors are obviously not the abstract case fea-
tures, but their mode of morpho-phonological realisation. The empirical
observation called 'matching effect' is most likely to be formulated in the
following way:

(9)   **The matching Effect**
      In 'matching' FR clauses form of the FR pronoun 'matches' the
      forms of both `m-case` and `r-case`.

Likewise, as discussed above, the case hierarchies should be considered as
hierarchies of forms:

(10) **Case Hierarchies**
      The case hierarchies at work in the resolution of case conflicts in FRs
      are language particular hierarchies of case forms.

That hierarchies are language particular follows from the observation that
they are hierarchies of forms – forms are language particular. In Spanish
and Romanian – languages which have no overt case morphology for sub-
ject and direct object – subjects and inanimate direct objects pattern to-
gether as bare NP/DP, while animate direct objects pattern together with
oblique forms as PPs. In German, subjects and inanimate direct objects
also pattern together at the lowest end of the scale, but animate direct ob-
jects take an intermediate position. Both animate nominative and accusa-
tive are NP/DPs – but with specific case morphology. Animate accusative
can be suppressed in favor of oblique cases and PPs, because its surface
form is 'weaker' than that of oblique cases.
      The difference between Spanish and German shows that a theoretic
model for case needs both abstract and morphological case to account for
the phenomenon in its language particular diversity.
      The theory has to formulate the relation between abstract case fea-
tures, both syntactic and semantic ones, and 'real' case morphemes. A
syntactic model that is able to encode this relation is the Chomskyan
minimalist framework (Chomsky 1995) that assumes that a sentence is a
pair [LF,PF] where LF is an abstract syntactic structure and PF is its pho-
nological or phonetic representation – the linear string of pronounced
words resulting from 'spelling out' the LF at some point in the course of
the derivation.
      I assume that a correspondence relation holds between the elements of
LF and PF. Usually, elements of PF correspond to elements of LF and vice
versa. For instance, a spelled out FR pronoun like *was* in (6) that occurs at
PF corresponds with the chain of the FR pronoun at LF. In optimality the-
ory, correspondence between different representations and representational
levels is a well-established conception developed in detail in (McCarthy &

Prince 1995). Formulating OT constraints on LF-PF correspondence is therefore a straightforward issue. I presented a detailed optimality theoretic analysis of the typology of FR constructions in (Vogel 2001), (Vogel, to appear*a*) and (Vogel, to appear*b*). In the present paper, I concentrate on those aspects of this approach that are relevant for case theory.

For the syntactic analysis I adopt the proposal by Rooryck (1994). He assumes that FRs are ordinary subordinate clauses, i.e., CPs with the FR pronoun in [Spec,CP]. The C^0 head of the FR has an agreement function that enables the element in [Spec,CP] to be sensitive to the requirements of the matrix verb:

(11) [$_{CP}$ FR-PRONOUN$_i$ C^0-AGR ... t$_i$-`r-case`]-`m-case`

The FR pronoun is an appropriate realiser for `r-case`, because the case position is part of the chain of the FR pronoun, and it is an appropriate realiser for `m-case` because it agrees via specifier-head agreement with the head (C^0) of the maximal projection (CP) that has `m-case`. This conception assumes that abstract case is a property of maximal projections. Overt case morphology is a property of PF correspondents of these maximal projections – a reflexion of their abstract case properties. They are the elements that are assigned thematic roles and occupy case positions. The next section presents additional evidence from German for the surface orientation of the phenomenon. I will return to the issue of deriving language particular case hierarchies in section 3.

2   Matching Effects with pied-piped DPs

An interesting complication comes from the fact that in many languages the FR pronoun is able to pied-pipe a phrase it is contained in. In German, this is possible with PPs, as in (12a), but also with complex DPs, if the pronoun is the possessor (12b,d), but not, if it is the complement of the head noun (12c).[3]

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[3]In the latter case, it is, however, possible to extract the pronoun, if it is contained in a nominative or accusative NP/DP:

(12) a. Ich lade ein, mit   wem   ich sprechen kann
         I   invite   with whom I   talk   can
     b. Ich lade ein, wessen Bilder   ich mag
         I   invite   whose pictures I   like
     c. *Ich lade ein, Bilder   von wem   ich malen möchte
         I   invite   pictures of whom I   paint want
         'I invite persons I want to paint pictures of'
     d. Ich lade ein, von wessen Bildern ich begeistert bin
         I   invite   of whose pictures I   amazed   am
         'I invite (someone) of whose pictures I am amazed'

With respect to (12a,d), we might say that the preposition is equivalent to case. That is, if we want to find out, whether the FR in (12a) is matching, we only have to look at the preposition and check, whether it is required by both the matrix and the embedded verb. But with respect to (12b) we have a choice between two elements: the FR pronoun and the DP that contains the FR pronoun. The structure in (11) suggests that it is the phrase occupying [Spec,CP], i.e., the whole complex NP, that is crucial, and not the FR pronoun embedded in it. This in turn means that the case morphology of the pied-piped head noun might induce matching effects.[4]

   To clarify this rather subtle issue, I made a little data query with seven participants and evaluated their judgements. It is based on the different paradigms of the German plural nouns *Eltern*/'parents' and *Geschwister*/'siblings'. The case paradigms of these nouns are as in (13):

(13) Morphological case paradigms for German *Eltern/Geschwister*:

	Eltern	Geschwister
NOM	*Eltern*	*Geschwister*
ACC	*Eltern*	*Geschwister*
DAT	*Eltern*	*Geschwister**n**
GEN	*Eltern*	*Geschwister*

(i)   a.   Ich lade ein, [von wem]$_i$ ich [$_{NP}$ Bilder t$_i$]   malen möchte
             I   invite   [of whom]$_i$ I   [$_{NP}$ pictures t$_i$]-ACC paint want
        b.   Ich lade ein, [von wem]$_i$ mich   [$_{NP}$ Bilder t$_i$]   begeistern
             I   invite   [of whom]$_i$ me-ACC [$_{NP}$ pictures t$_i$]-NOM excite
        c. *Ich lade ein, [von wem]$_i$ ich [$_{NP}$ Bildern t$_i$]   etwas abgewinnen kann
             I   invite   [of whom]$_i$ I   [$_{NP}$ pictures t$_i$]-DAT something gain can

For this and other asymmetries between the structural cases nominative and accusative on the one hand and dative as oblique case on the other hand, see also (Vogel & Steinbach 1998).
[4] I thank Robert Frank (p.c.) and Alan Prince (p.c.) for bringing this possibility to my attention.

The crucial difference that is exploited in this query is the dative morphology. Because the accusative and nominative forms of *Eltern* are identical to the dative form, we expect a matching effect here. But we do not expect a matching effect with *Geschwister(n)*, because here the dative form differs from nominative and accusative. The judgements in the sample below show that there is an effect. The sample uses the verbs *einladen* and *mögen* which assign accusative to their object, and *helfen* and *vertrauen* which assign dative. The data in the sample follow pattern in (14):

(14) a. `m-case` = ACC ; `r-case` = ACC
      b. `m-case` = ACC ; `r-case` = DAT
      c. `m-case` = DAT ; `r-case` = DAT
      d. `m-case` = DAT ; `r-case` = ACC

In German, the patterns in (14-a-c) yield a well-formed FR construction, while the one in (14-d) is impossible. With *Eltern* as head noun, however, even this pattern should be possible, because the surface forms for accusative and dative are identical.

The participants were asked to give their judgements in a graded fashion, and each judgement type was correlated with a value in the following way:

  o.k.   = 4,0
  ?   = 3,0
  ??   = 2,0
  ?*   = 1,0
  *   = 0,0

The average judgements for the sample sentences were as given below:[5]

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[5] Note that there is a possibly disturbing factor hidden in the (a-) and (d-) examples that I overlooked when I collected the sample: *mögen* can embed another verb, and so the examples can be interpreted as elliptical. The FR in (15a) could, for instance, mean: *wessen Eltern sie helfen* mag/'whose parents she likes <u>to help</u>'. The interpretation we are only interested in is nevertheless that she likes the parents. Under both readings (15a) is well-formed anyway. This is not necessarily true of (15d). Here the unwanted resulting interpretation should be: 'Maria helps that person whose parents she likes to help'. The two occurrences of 'help' have different objects here, and I have the impression that the two objects should be identical under ellipsis, and thus (15d) is semantically odd. This might make the clause worse than other clauses that have the same case pattern, but do not have this ambiguity. (ia) seems to be better than (15d), and significantly better than (ib). If this is true, then it is even clearer that we observe a matching effect:

(15) a.   Maria lud ein, wessen Eltern   sie   mag   4,0
           Maria invited whose parents-ACC she likes

     b. ?Maria lud ein, wessen Eltern   sie vertraut   3,4
           Maria invited whose   parents-DAT she trusts

     c. ??Maria hilft, wessen Eltern   sie vertraut   1,6
           Maria helps whose parents-DAT she trusts

     d. ?*Maria hilft, wessen Eltern   sie mag   1,2
            Maria helps whose parents-ACC she likes

(16) a.   Maria lud ein, wessen Geschwister sie mag   4,0
           Maria invited whose siblings-ACC she likes

     b. ??Maria lud ein, wessen Geschwistern sie vertraut   2,0
           Maria invited whose siblings-DAT   she trusts

     c. ?*Maria hilft, wesen Geschwistern sie vertraut   1,0
           Maria helps whose siblings-DAT she trusts

     d. *Maria hilft, wessen Geschwister sie mag   0,4
           Maria helps whose siblings-ACC she likes

The following observations can be made:

Observation 1: With the exception of the (-a) clauses, which are fine in both paradigms, the clauses with *Geschwister* are worse than those with *Eltern*. As everything else is equal, this shows that the surface form of the head noun has an effect.

Observation 2: Among the two matching patterns (-a) and (-c), the one with accusative (-a) is significantly better than the one with dative (-c) in each paradigm. This can be interpreted as an effect of the case hierarchy. As dative is more marked than accusative, the conditions under which a FR with these cases is well-formed differ. Accusative as `m-case` allows for a broad range of non-matching configurations, while dative as `m-case` requires matching. A factor that might be responsible for the degraded acceptability in the (-c) cases is presumably the fact that the FR starts with a non-matching geni-

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(i)   a. ??Maria hilft, wessen Eltern sie nett findet
          Maria helps whose   parents she nice finds
          'Maria helps (persons) whose parents she finds nice'

    b. * Maria hilft, wessen Geschwister sie nett findet
          Maria helps whose siblings   she nice finds
          'Maria helps (persons) whose siblings she finds nice'

(16a,d) are unambiguous, because under the elliptical interpretation the head noun should have dative morphology, but it has accusative morphology in both cases.

tive *wh*-pronoun. The matching head noun comes only in the second position. This might induce at least parsing difficulties.

Observation 3: In the (-d) pattern, which usually yields ungrammaticality in German, the example with *Eltern* is significantly better than the one with *Geschwister*. In fact, as probably shown in footnote 4, the example with *Eltern* is fairly acceptable, though not perfect, while the one with *Geschwister* is clearly ill-formed. This observation confirms the prediction about case matching that was made above, namely that it is the phrase in the [Spec,CP] position of the FR that is crucial for case checking and the matching effect. If the FR pronoun is the head of this phrase, then it is also crucial for case matching, but it need not be crucial, when it pied-pipes its host phrase.

Although the data clearly confirm that the matching effect is about surface forms, the effect is smaller than one might expect. (16c) and (15d) are still rather bad. But there might be other factors that are responsible for this. One candidate is interpretation. Let us assume that the head noun satisfies the case requirements in a clause like (16c). We then have a situation where the element that is responsible for the interpretation, i.e., the FR pronoun, and the element that is responsible for case checking are not identical. In other words, the dative case required by the matrix verb for a specific thematic role, say, benefactive, is realised by a different element than the one that is interpreted as having that role. Does (16c) mean "Maria helps those persons whose siblings she trusts" or does it mean "Maria helps all sets of siblings of some person for which holds that she trusts these siblings"? The first reading is clearly preferred, but the more one thinks about it the more accessible the second reading becomes. It is quite easy to force the second type of reading:

(17) Ich lese wessen Bücher ich will
       I   read whose books I   want
       ≈ 'I read whose books I want (to read)'

The FR is elliptical, which helps hiding its unusual semantics. Here the only plausible reading is that the FR refers to a set of sets of books by some author. I made the experience that German native speakers, when confronted with this example, usually judge it as well-formed without hesitating, obviously overseeing the strange semantics that it contains, and

only after being explained this problem and rethinking it they start to worry about it.[6]

In (16c), the unique dative morphology of *Geschwistern* makes this problem obvious, and with it the discrepancy between the element that we want the reference of the FR to be established on (the FR pronoun) and the one that realises the required case. This might yield decreased acceptability.

I have no theory of the semantics of FR constructions, leaving this open to semanticists like Dayal (1996) and others. But it is clear that FRs are in principle ambiguous, if the FR pronoun pied-pipes other material. Consider the following contrast:

(18) a. Ich lade ein, mit wem ich gut zurechtkomme
     I   invite   with whom I   well get on
     'I invite whoever I get on well with'
  b. Ich treffe mich, mit wem ich gut zurechtkomme
     I   meet myself with whom I   well get on
     'I meet with whoever I get on well'

The FRs in these examples are identical, but in (18b) the pied-piped preposition is interpreted as belonging to the matrix verb, while in (18a) it is not. Whether the same thing is possible with pied-piped head nouns depends on the acceptability of (17) and similar examples. I am unable to decide this yet, but have the impression that it is indeed possible.

3   Case Hierarchies

While it is undoubted that case hierarchies are crucial for the acceptability of non-matching FRs in many languages, there are different proposals about the nature of these hierarchies. Two questions have to be answered:

(19) a. How many elements do case hierarchies have?
  b. Is there one universal case hierarchy or are there different case hierarchies in different languages?

Let us first discuss question (19a). Grosu (1994) argues on the basis of facts about non-matching FRs in Spanish, Catalan and Romanian for a hierarchy consisting of only two elements: nominative vs. non-nominative,

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[6] Another interesting observation is that the 'strange' reading only occurs with clause final nuclear stress. It can be blocked with nuclear stress on *Bücher*. Here only the possessive pronoun can provide the referent of the FR clause. This makes (17) pragmatically odd.

or unmarked vs. marked. Spanish has no case morphology and is in this very much like English. Here, we in fact do have only two different elements that have to be taken into account, namely, DP and PP. So in Spanish it makes sense to assume that the hierarchy consists of only two elements. This also holds of English. But in English, animate and inanimate direct objects behave alike, they are NP/DPs. We still have language particular variation that has to be accounted for.

The question, whether a markedness hierarchy has two or more elements is of significant importance for the structure of the theory. In a two-element hierarchy, markedness is determined in an absolute fashion:

(20)   A < B → A is always marked, B always unmarked

A is the unmarked form and B the marked form, no matter in which context they occur. A hierarchy with three (or more elements) contains (at least) one intermediate element that is relatively (un-)marked:

(21)   A < B < C → A is always marked and C always unmarked, but B is marked compared to A, but unmarked compared to C.

In the hierarchies proposed for German B and Gothic, the accusative is such an intermediate element: it is less marked than dative and other oblique forms, but more marked than nominative.

This is directly mirrored in the discussed data. The accusative 'wins' against the nominative, but 'loses' against the dative. Because in German FRs the pronoun must carry `r-case`, there is no way to get a FR when `m-case` is more marked than `r-case`:

(22) German B, nominative vs. accusative:
    a. Wen   du einlädst wird auch kommen
         who-ACC you invite   will also come
    b. *Sie zerstört, wer   ihr   begegnet
         She destroys who-NOM her-DAT meets

(23) German B, accusative vs. dative:
    a. Ich lade ein wem   ich vertraue
         I invite   who-DAT I   trust
    b. *Ich vertraue, wen   ich einlade
         I   trust   who-ACC I   invite

In Gothic, the FR pronoun can realise either `m-case` (this phenomenon is called 'case attraction' in the literature) or `r-case`:

(24) Gothic, nominative vs. accusative (Harbert 1983, 248-9)
    a. jah *þo*-ei   ist us   Laudeikaion jus ussiggwaid
       and Acc-Compl is from Laodicea   you read
       'and read (the one) which is from Laodicea' (Col 4:16)
    b. *þan*-ei   frijos   siuks ist
      Acc-Compl you-love sick   is
      '(The one) whom you love is sick' (Joh. 11:3)

In (24a) the `m-case` is accusative and in (24b) it is the `r-case`. Nevertheless, the FR pronoun carries accusative morphology in both instances. Accusative always 'loses' against oblique case, again irrespective of which verb requires which case:

(25) Gothic, accusative vs. dative/genitive (Harbert 1983, 248-9)
    a.   hva nu wileiþ ei taujau *þamm*-ei qiþiþ þiudan Iudaie?
        what now you-want that I-do DAT-Compl you-say king of-Jews
        'What now do you want that I do to him (whom) you call the king
        of Jews?' (Mk 15:12)
    b.   bugei *þiz*-ei   þaurbeima
        buy GEN-Compl we-might-have-need-of
        'Buy (that) of which we might have need' (Joh 13:29)

If one tried to use a two-element hierarchy here, one would have to decide whether accusative counts as marked or as unmarked. Depending on what this decision would be, it would either be predicted that accusative cannot lose against dative or genitive (because it is marked) or that it cannot win against nominative (because it is unmarked).

    This answer to question (19a) already suggests an answer to question (19b): if the case hierarchy of Spanish has two elements, but those of German B and Gothic have three, they must be different, hence, language particular. One might argue that here we are talking not about abstract case, but about surface case forms or just types of surface case forms. We could, for instance, assume that surface realisation is language particular, but the abstract case hierarchy is universal.

    It might be possible to formulate a universal abstract case hierarchy in terms of structural case (i.e., grammatical function) vs. oblique cases (i.e., thematic roles):

(26) subject (nominative) < direct object (accusative) < oblique

But as we saw above, in Spanish, animate accusatives behave like obliques and inanimate accusatives behave like nominative. In German B, on the other hand, inanimate accusatives behave like nominative and animate accusatives make up an intermediate category:

(27)   **German case hierarchy**:
        nominative, inanimate accusative < animate accusative < dative, genitive, PP
        Spanish case hierarchy:
        nominative, inanimate accusative < animate accusative and all other PPs

Animate accusative can both be marked (Spanish) and (relatively) un-marked (German). It would be impossible to explain this variation with reference to a single universal abstract case hierarchy. We have to consider language particular hierarchies of case *forms*/morphemes, rather than only abstract case. Abstract case might be universal, and even be ranked in a universal hierarchy, but it is crucial how it is instantiated in the overt morpho-syntax of a particular language.

There is nearly no evidence from any language that I examined that the case hierarchies that we need in order to explain (non-)matching effects in FR constructions contain more than three elements.[7] The lowest element

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[7]Groos & van Riemsdijk (1981) and Harbert (1983) give some examples from Ancient Greek where a dative is suppressed in favor of a genitive. This in itself might suggest a hierarchy of four elements for Ancient Greek. The problem is that such data seem to be extremely rare. The observed instances are all about case assigned by prepositions. Another question is whether the reversal, genitive suppressed in favor of dative, never occurs. If it does, then we have a case like Icelandic, where any case can be suppressed – but restricted to PP-internal case.

Furthermore, it is unclear whether case hierarchies are independent of the domains the cases occur in. E.g., it has often been claimed that the genitive assigned to subjects of NPs in English is a structural case. If this is also true in German, then the German genitive is semantic, i.e. the reflection of a thematic role type, if assigned by V, and syntactic, i.e., the reflection of a grammatical function, if assigned by N/D. Case assigned by prepositions has also often been treated as structural. A dative assigned by a preposition might have a status that is different from that of a dative assigned by a verb. Whether this difference is reflected in case hierarchies, is an open issue. In the final section of this paper, I correlate the possibility of suppression of oblique case with the possibility of recoverability. In a system like the Icelandic one, where verb-dependent case seems to be strictly lexically determined, it is easier to recover a suppressed case than in a system that has lexeme-independent mechanisms for determining the case of an NP. Ancient Greek might have a system of lexeme-dependent case determination for complements of P, and a lexeme-independent mechanism for complements of V.

of the hierarchies is always the unmarked or nominative case, and at the high end of the hierarchy we have oblique forms. The only difference between languages seems to be whether the surface form of the direct objects (accusative) has an intermediate status or not. This might indeed be a universal parameter. One possible way to derive it is explored in the next section.

3.1 Deriving Language Particular Hierarchies

This subsection discusses whether and how language particular case form hierarchies can be described in a universal way. I want to explore one possible way to do that within optimality theory. It is based on the method of *harmonic alignment*, as described in (Prince & Smolensky 1993), and applied, for instance, by Aissen (2000):

(28)   **Alignment.** Suppose given a binary dimension D_1 with a scale $X > Y$ on its elements { X,Y }, and another dimension D_2 with a scale a $>$ b ... $>$ z on its elements. The *harmonic alignment* of D_1 and D_2 is the pair of Harmony scales:
H_x: X/a $>$ X/b $>$ ... $>$ X/z
H_y: Y/z $>$ ... $>$ Y/b $>$ Y/a
The constraint alignment is the pair of constraint hierarchies:
C_x : *X/z $>>$ ... $>>$ *X/b $>>$ *X/a
C_y : *Y/a $>>$ *Y/b $>>$ ... $>>$ *Y/z
(Prince & Smolensky 1993, 136)

The general idea is that we take two universal markedness scales and derive a system of OT constraints in a fixed ranking by combining these two scales. The two scales that are at issue here could be a universal abstract case hierarchy and a universal hierarchy of form types. Let us consider a simplified version of it first:

(29)   Case scale: SU(bject) < D(irect) O(bject) < OBL(ique case)
Form scale: DP $<$ PP

The method described in (28) gives us the following pair of universally fixed constraint hierarchies:[8]

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[8] These constraint hierarchies express that it is more marked to have oblique case as DP than it is to have direct objects or subjects as DP, and likewise, it is more marked to have nominative as PP than it is to have direct objects or oblique cases.

(30)   *DP/OBL >> *DP/DO >> *DP/SU
         *PP/SU >> *PP/DO >> *PP/OBL

The interaction of the constraints of these two hierarchies derives the inventory of case systems of particular languages: cases are (in this simple version of the case hierarchy) either realised as DP or as PP. The following logically possible systems have to be considered (we use dative as one instance of an oblique case):

(31) a.   SU/DP ; DO/DP ; DAT/DP
      b.   SU/DP ; DO/DP ; DAT/PP
      c.   SU/DP ; DO/PP ; DAT/PP
      d.   SU/PP ; DO/PP ; DAT/PP
      e.   SU/DP ; DO/PP ; DAT/DP
      f.   SU/PP ; DO/PP ; DAT/DP
      g.   SU/PP ; DO/DP ; DAT/PP
      h.   SU/PP ; DO/DP ; DAT/DP

The patterns (31a-d) are predicted to be possible, and those in (31e-h) are predicted to be impossible. The reason for this is the universally fixed ranking of the constraints within each of the hierarchies. If *PP/DAT dominates *DP/DAT, then necessarily *PP/DO also dominates *DP/DO, hence, if an oblique case (like, e.g., dative) is a DP, then the less marked cases are necessarily also DPs. This shows why (31e,f,h) are out. Something similar is responsible for the oddity of the pattern in (31g). If subjects are realised as PP, then necessarily all the other cases have to be realised as PP, too, because in this case *DP/SU has to be ranked higher than *PP/SU, and this means that all the other *DP/⟨case⟩ constraints have to be higher than their corresponding *PP/⟨case⟩ constraints. All cases have to be realised as PPs.[9]

  As already said, the picture that we just have drawn is a simplified version of what actually happens. However, only the complexity changes, but not the logic of the system. It is only that the two hierarchies have more elements than given above. A (still incomplete, but) perhaps more realistic version of the case hierarchy looks like this:[10]

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[9]Languages that have pattern (31d) might be Korean and Japanese, which have a uniform way of indicating case with postpositional particles.

[10]This hierarchy is derived from loosely comparing case systems of European languages. It is only assumed for expository purposes. Finnish and Hungarian have morphological case for all listed cases, Russian for all except locatives, German for all except locatives and instrumental. I do not think that it is really possible to make up a hierarchy that fits the actual typology of case sys-

(32)   subject > direct object > Dative > Genitive > Instrumental > Locatives

The hierarchy of forms needs the following three elements:

(33)   'bare' DP (i.e., without case morphology) < 'inflected' DP (i.e., with case morphology) < PP

In order to produce a system of universally ranked constraints by harmonic alignment we need a scale of two elements. So what we have to do here is break the scale in (33) into two scales:

(34) a.   zero ('null') realisation of case (i.e., 'bare' DP) < ('overt') realisation of case (i.e., 'inflected' DP or PP)
     b.   DP ('bare' or 'inflected') < PP

The case scale is aligned with both of these scales. This now gives us not two, but four scales of universally ranked constraints:

(35) a. $*SU_{overt} \gg *DO_{overt} \gg *DAT_{overt} \gg *GEN_{overt} \gg *INSTR_{overt} \gg *LOC_{overt}$
     b. $*LOC_{null} \gg *INSTR_{null}$ ...
     c. $*SU/PP \gg *DO/PP \gg *DAT/PP$ ...
     d. $*LOC/DP \gg *INSTR/DP$ ...

These scales again interact freely. However, harmonic alignment has the same effects as before: it rules out case systems that contradict the markedness hierarchy. If, say, instrumental is a DP, then subjects or objects cannot be PPs etc.

The scales in (35a) and (35b) are combined as usual in harmonic alignment. The same holds for the scales in (35c,d). In order for a system with a contradictory inventory to win, it should somehow overrule the results of these two alignment processes. But this is impossible. It is not

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tems, in particular, it is not really clear how semantic cases are ranked with respect to each other or whether they are ranked at all. Cases that occur only in some languages, like ergative and partitive, should be included. Ergative languages cannot be accounted for this way, I am sure. Many further empirical problems remain. We also need differentiations for animacy, as we saw above. The heuristics behind the hierarchy is that if a language has morphological case for a certain 'universal' semantic case type, e.g., instrumental, then it does not have PP for anything below. It might be correct for the Indo-European and Finno-Ugric languages, but I have not checked this and, as I said, I do not believe in it anyway.

easy to give an example of what is going on, but I will, though very briefly, try to do so. Imagine what must be the case in order to have subjects with case morphology and direct objects without. For direct objects without case morphology, we would have to rank the constraint $*DO_{overt}$ high. But now the scale in (35a) says that $*SU_{overt}$ must be ranked even higher. So subjects can only have case morphology if $*SU_{null}$ is higher than $*SU_{overt}$. But (35b) tells us that $*DO_{null}$ is higher than $*SU_{null}$. And this now prohibits zero case morphology for accusative – in the same way as it did before. Ranking of *SU/DP high has the effect of realising subjects as PPs. But now again *DO/PP, *DAT/PP etc. must be ranked higher and so all cases must be PPs. The effects of the universal scales remain the same as before. We only get a more complex system.

This picture might appear more or less attractive. But it is an open question whether it fits the empirical facts. A counterexample would be a language with a case system excluded by the markedness scales of the proposed system. Such an example is Romanian. Although Romanian is like Spanish in that it marks animate direct objects with a preposition, the language does have a case morphology for dative and genitive that is distinct from nominative/accusative. This means that a lower marked case, the (animate) accusative/direct object, is realised as a higher marked form, PP, than two higher cases, namely, dative and genitive, which are 'only' realised as inflected DPs.

(36)   Case forms of Romanian animate *wh*-pronouns and nouns:

Case	animate *wh*-pronoun	animate noun
NOM	cine	Maria
ACC	pe cine	pe Maria
DAT	cui	Mari-**ei**
GEN	cui	(a) Mari-**ei**

(extracted from Grosu 1994)

The only way out of this problem without giving up the whole idea would be a further refinement of the system: it is possible to keep the overall approach, if we split the single system that we developed thus far into two subsystems: one subsystem for the structural cases or grammatical functions and another subsystem for the semantic or oblique cases. This avoids the contradictions for Romanian, because the surface forms for direct object (which is assumed to be a structural case) and dative and genitive (which are assumed to be oblique cases) are now determined in different 'submodules' of the 'case module'. If we assume such two subsystems, we no longer have a way to determine the case hierarchy of a language: what

is the hierarchical relation of the case forms provided by the two case sub-systems?

On the other hand, the answer might be quite straightforward: oblique cases are on the highest end of the hierarchy anyway, and nominative is on the lowest end. So the only open issue is whether accusative groups together with one of them or whether it is placed in between. English reduces accusative to nominative, Gothic and German place it in between nominative and the oblique forms.[11] Spanish and Romanian group inanimate accusatives with nominative and animate accusatives with oblique forms. None of the case hierarchies at issue in the discussion of FR constructions is more complex than that. This means that only the (sub)system that determines the surface realisation of grammatical functions is responsible for the variation between languages. Dative, instrumental etc. are always at the highest end of the case hierarchy, no matter how they are realised. Only the structural cases are ranked relative to their mode of surface realisation. This confirms the claim repeatedly made in generative syntax that language particular variation is essentially variation in functional categories.

A language particular hierarchy can now be created in two steps. We take its inventory as given and then rank the cases according to the following abstract case hierarchy :

A: subject < direct object < oblique (semantic) case

In a second step, we rank all cases that are PPs together with oblique case:

B: subject (if DP) < direct object (if DP) < PP, oblique case

All language particular case hierarchies involved in case conflict resolution in FRs seem to follow this pattern. This insight also opens up a solution for the problem of how to rank semantic cases: they need not be ranked relative to each other. Neither do we need to postulate that all languages have, e.g., ergative or partitive case, which seems to be plain wrong. We could even treat semantic cases like lexical items, insfar as their existence is an arbitrary property of a particular language.

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[11]To be precise, German places animate accusatives in between nominative and oblique forms, but the inanimate accusative and nominative pronouns are grouped together.

3.2 Modularity

The last section described a way of deriving language particular case systems in an optimality theoretic framework. The question arises whether we have to encapsulate this in a separate 'case module' or whether it is part of the general OT syntactic evaluation procedure. I will argue that we have to assume the former. Consider the German B example where the surface form turns a non-matching FR into a matching one:

(37) Er zerstörte was ihm   begegnete
     He destroyed what him-DAT met

With respect to abstract case, we have non-matching here:

(38) NP V [FR *wh*$_i$ NP V t$_i$-NOM]-ACC

This configuration is ungrammatical in German B, unless the surface form of the pronoun is homophonous for nominative and accusative, which is the case in (37) with the inanimate *wh*-pronoun. But how can the system 'know' that? The pronoun either realises `r-case` or `m-case`. If it realises `r-case`, the FR contains no representation of the surface form of `m-case` and vice versa. But what we have to do is exactly this: compare the *given* form of the pronoun (in an expression) with the form that the *suppressed* case *would have yielded*. This suppressed form represented nowhere. It has to be computed separately. Whatever constraint is responsible for this evaluation, it relies on comparing the given form with an absent form that has to be derived elsewhere in the grammar, e.g., in a separate case module.[12]

Even in an OT grammar, where both forms could be represented as different candidates, this is unavoidable. A single candidate can only either use one or the other PF form. OT constraints can refer relations between input and output candidates, but not between candidates. Additional machinery would be required to do this. Another problem is the relative markedness of case forms. In German B and Gothic, accusative can be suppressed in favor of dative, but not in favor of nominative. I.e., the same form can sometimes be well-formed, and sometimes ill-formed. This also means that we cannot determine in absolute terms that, e.g., `m-case` is less marked than `r-case`, or that the suppressed case is less

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[12] I wonder whether such a constraint can be part of a derivational grammar that only allows for strictly local operations. It has the flavor of a transderivational constraint. The easiest way to escape that problem would be to assume that the constraint is not part of syntax proper but a restriction on the LF-PF interface.

marked than the realised case. The case hierarchy has to be referred to directly.

In (Vogel, to appear*a*) I use a single constraint to implement the effects of the case hierarchy. This constraint is about overt case realisation and allows for cases that are higher on the (language particular) case (forms) hierarchy to 'alternatively realise' a lower case. E.g., in German dative can alternatively realise accusative, but not vice versa.

4 Optimality Theoretic Approaches on the Typology of Case Systems

In this section I want to discuss very briefly some approaches to case systems in OT that have recently been proposed, compare them with the model sketched in the last section and add some speculations about how to improve it further.

Woolford (2000) tries to derive the differently rich case systems of different languages by a system of markedness constraints for cases that conflict with faithfulness constraints on lexical requirements. The markedness constraints implement a universal hierarchy of cases, where nominative is at the lowest end and oblique cases are high, as in (39):

(39) *DAT >> *ACC >> *NOM

Woolford assumes that lexical items can universally select for the same cases, but that in some languages constraints that require faithfulness to lexical requirements ('FaithLex') are lower ranked than the markedness constraints on cases, such that a candidate wins that uses a case that is lower ranked than the required one. For instance, in English the ranking is "*Dative >> FaithLex". Thus, English does not have dative case, even if a verb requires dative case.

Recent papers by Fanselow (2000), Wunderlich (2000) and Aissen (2000), though quite different in the analyses, share with Woolford's proposal this problematic type of constraints on case: what is meant by 'DAT' in the constraint '*DAT' is morphological case. These authors caertainly do not claim that in a language like English it is impossible to express what is expressed by dative case in German or Icelandic. It is only done in a different way, namely, by using a preposition, in particular, the preposition *to*. Usage of this preposition obviously does not violate *DAT (because if it did, then this would yield ungrammaticality given the ranking that Woolford proposes). But on the other hand, Woolford treats dative case in Japanese as true case, although it is usually assumed that Japanese has a system of postpositions that expresses cases as well as the counterparts of ("our") prepositions in the same way syntactically and

morphologically (i.e., case marked DPs are PPs syntactically). How can this different treatment of PPs be justified? I think it cannot.

The alternative treatment that I explored in section 3.1 derives case systems in a different way. Although dative, genitive and oblique cases can also be assumed to be universal categories, they are universal only as abstract cases, i.e., thematic roles or families of thematic roles. It is subject to optimisation how they are encoded in a particular language, i.e., how or whether they are *grammaticalised.* There is no constraint like *DAT (which would here mean, literally, "no constituent with a thematic role of the dative type"). Whether a language has morphological dative case is the result of constraint interaction: $*DAT_{null}$ and *DAT/PP are ranked on top of $*DAT_{overt}$ and *DAT/DP, as in (40):

(40)

dative	$*DAT_{null}$	*DAT/PP	$*DAT_{overt}$	*DAT/DP
DP-ø	*			*
☞ DP-*aff*			*	*
PP		*	*	

This use of the notion 'dative' is parallel to the treatment of case in (Fillmore 1968). Case is seen as more or less equivalent to thematic or semantic role. For oblique or inherent case, such a treatment has often been proposed. Woolford (2000) claims that the following correlations hold:

(41)

dative	loosely correlates with	goals and experiencers
ergative	loosely correlates with	agents
inherent acc	loosely correlates with	themes

For the grammatical functions subject and direct object such a semantic classification is less straightforward – nominative and accusative can be linked to any thematic role in, e.g., German. In the final paragraphs of section 3.1 I suggested that the 'case module' must contain two different subsystems for the determination of the forms for oblique (or 'inherent') and structural case. If oblique case is connected to thematic role concepts, could structural case also be connected to semantic categories? Fillmore (1977) relates it to what he calls 'perspective': The verbs *buy* and *sell*, for example, describe the same event with the same participants, but they

describe it from different perspectives, that of the buyer and the goods, and that of the seller and the goods, respectively.[13]

On the basis of Fillmore's (1977) insights we might assume that structural case is the grammaticalisation of perspective and inherent case is that of thematic roles. If both strategies co-exist in a language, then they potentially conflict whenever the morphological case of a subject or a direct object has to be determined. The case systems of individual languages differ exactly in how they case-mark subjects and objects. This would be predicted in an OT account implementing the just sketched treatment.

Consider a system of three constraints: one requiring the grammaticalisation of thematic roles, "GrROLE", and two constraints requiring the grammaticalisation of subject and direct object, "GrSU", and "GrDO" – now understood as reflecting being in 'perspective' in the sense of Fillmore (1977). Universally, GrDO is higher than GrSU, because objects are more marked. We then have a typology of three language types:

(42) a. GrROLE >> GrDO >> GrSU
     b. GrDO >> GrROLE >> GrSU
     c. GrDO >> GrSU >> GrROLE

Language (42c) is a transitive language. It only has oblique cases for NPs that are neither subjects nor direct objects. This could be German and many other languages. Language (42b) has oblique case for subjects, but not for direct objects. This is a typical ergative pattern. Language (42a) is a language that has no genuine markers for direct object and subject, and uses oblique case for both. Icelandic comes very close to this.[14] There is much more diversity than this suggests, however, so (42) is only a speculation.

With respect to oblique case, languages are more or less equivalent – it all comes down to whether a certain universal thematic role is expressed by a case morpheme or by a preposition. The system sketched in section 3.1 uses a hierarchy of oblique cases, i.e., a hierarchy of thematic roles. Such hierarchies have been proposed very often, but for a totally different purpose: the determination of the linking of roles to structural case, which would be done in a different way here, namely, by using a verb's perspective. The hierarchy that we are looking for reflects the universal tendency of a thematic role type to be expressed by case morphemes, i.e., to be

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[13]See (Vogel 2000) for an implementation of 'perspective' into an extremely flexible theory of linking and thematic interpretation.

[14] This could mean that all cases in Icelandic are considered to be oblique. The final section takes a closer look on Icelandic.

grammaticalised. If the hierarchy that I made use of above, repeated below, is correct, then there is, e.g., no language that has an instrumental case morpheme, and does not also have a dative case morpheme.

(43)   Locatives > Instrumental > Genitive > Dative

Whether this or another such hierarchy can be made up or not is an open question.[15] I have nothing more to say about it, except for expressing some skepticism. English has a nice little preposition, *about*, that is nearly exclusively used to express propositional content. Ergative languages have a special case morpheme, the ergative, that is used as inherent case for the thematic role agent. We certainly do not want to claim that the preposition *about* is universal in any sense. Like everything lexical, the existence of this preposition is a mere accident, a result of the development of the English language. Nevertheless, the meaning of *about* is universal insofar as it can be understood and translated into any language of the world. What would justify our different treatment of ergative case? Oblique case might be an accidental property of languages, too. However, as soon as we have a case for agents, which often are subjects, it is clear that it conflicts with the tendency to grammaticalise the perspective, and languages need strategies to handle this conflict, perhaps in the way shown above.

The third section started with a discussion of case hierarchies as observed to be at work in the case conflict resolution strategies in FRs in many languages. Though these are language particular hierarchies of forms, it turned out that there are some universal regularities: oblique cases are always at the highest end of the hierarchy, no matter what form they have. The case for subjects, nominative, is always at the lowest end of the hierarchy, and whether accusative, the case marker for direct objects, is placed in between, together with nominative or the oblique forms, largely depends on its form, and that of the nominative. I derived a proposal for the typology of case systems with the OT method of harmonic alignment. It makes the correct typological predictions for structural case and might also be carried over to oblique cases. However, this section showed that it is necessary to keep the distinction between structural cases and oblique cases, and maybe not simply by putting them to two different ends of a hierarchy, but by treating them in two totally different ways. Grammatical functions, especially subjects, are a universal category. But oblique morphological cases might as well be seen as accidental, arbitrary

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[15]A basis for such a markedness hierarchy might be conceptual markedness: the more general, or abstract, a thematic role concept is, the more likely is it to be grammaticalised as an inherent case. Again, whether this can be stated, is an open, empirical issue.

properties of a language, i.e., as lexical items. In this case, universal grammar has nothing to say about them, and it should not do so.

5 The Place of the Case Module Within Language Particular Grammars

Given the discussion in section 3, it might be an astonishing fact that there is a language with a quite elaborate morphological case system that does not seem to care at all about case hierarchies in FR constructions. This language is Icelandic. Much like German and Romanian, Icelandic distinguishes four cases, namely, nominative, accusative, dative and genitive. It is a by now well-known fact that each of these cases can occur on subjects (and, of course, also on objects) in Icelandic. But it is a less well-known fact that each of them can freely be suppressed – in relative constructions, including FRs.

In the following examples, two headed restrictive relative constructions (44a,c) are paired with two FR constructions (44b,d). The chosen verbs are *hjálpa*, which requires a dative object, and *elska*, which requires an accusative object. In German, the same configuration would yield ungrammaticality for (44b). This is not the case here. Icelandic FR pronouns uniformly take m-case, and r-case is simply suppressed. This is, however, not very surprising, if we look at restrictive relative clauses. They are uniformly introduced by the complementiser *sem*, and the case of the relativised argument (which is represented by a relative pronoun in many other languages) remains unrealised:[16]

(44) a. ég hjálpa þeim   /*þann   sem ég elska
          I help   those-DAT/ those-ACC that I like
      b. ?ég hjálpa hverjum / *hvern   (sem) ég elska
          I help   who-DAT/ who-ACC   (that) I like
      c. ég elska *þeim   / þann   sem ég hjálpa
          I like   those-ACC/ those-DAT that I help
      d. ?ég elska *hverjum / hvern   (sem) ég hjálpa
          I like   who-ACC/ who-DAT (that) I   help

How does Icelandic fit into the picture? Either Icelandic has no case hierarchy, or case conflicts play no role in this grammar. Both solutions can be formulated within the model I am assuming. But further examination

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[16]The FRs in (44b,d) are judged as 'archaic' or 'a bit strange' by my informants. But they agree that they are possible. The complementiser *sem* is optional here, contrary to restrictive relative clauses.

shows that there is more behind this fact. We can see that in a comparison of the dative in German and Icelandic. German has a phenomenon called 'free dative'. Dative objects can be added in many clauses, getting a benefactive, malefactive, 'affected possessor' or similar reading:

(45) Ich backte meiner Mutter   einen Kuchen
       I   baked my   mother-DAT a   cake-ACC
       'I baked my mother a cake'

Contrary to German, Icelandic does not have free datives (cf. Holmberg & Platzack 1995, 202):

(46)??Èg bakaði mömmu   minni köku
       I   baked mother-DAT my   (a) cake

This 'gap' might suggest the following conclusion: The case systems of German and Icelandic have different places in their grammars. In German, case is comparatively autonomous. Oblique case plays an independent role in semantic interpretation. Suppression of oblique case thus yields semantic uninterpetability. In Icelandic, case is always lexically licensed, and because of this case suppression is easily recoverable via the lexical entry of the verb. No semantic information is lost by case suppression. This explains why on the one hand in relative clauses all cases can be suppressed, but on the other hand, cases cannot make an independent contribution to the clause.

     If this conclusion is correct, then we have another argument for the assumption of a case module. The different functions of case in different languages can be explained under the assumption that the interaction of the grammar modules is also subject to language particular variation – this is a natural assumption under a modular conception of grammar. It appears less natural for a non-modular conception, although it is not impossible.

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